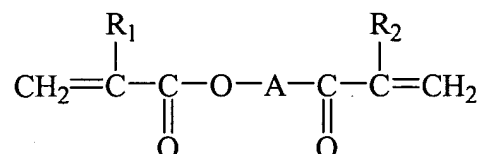


### A Listing of the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

### Amendments to the Claims:

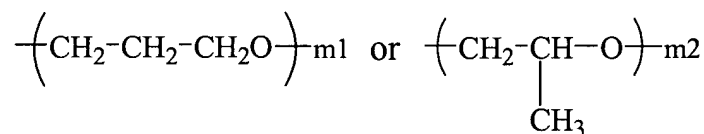
1. (previously presented): A polymerized monomeric composition comprising: from 35 to 70 parts by weight of one or more monomers (I) of formula:



wherein

R<sub>1</sub> and R<sub>2</sub> represent H or CH<sub>3</sub>,

A is a divalent moiety of formula:

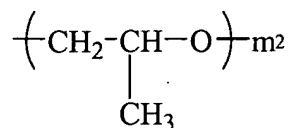


m<sub>1</sub> and m<sub>2</sub> each are an integer in the range of 4 to 20,

from 5 to 50 parts by weight of a monomer (II) comprising at least a urethane unit and at least two (meth)acrylate functions, and

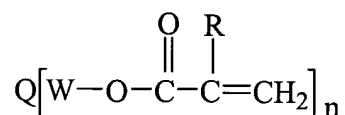
from 5 to 40 parts by weight of a monomer (III) with a high Abbe number comprising at least one non aromatic cyclic or polycyclic hydrocarbon moiety and further comprising one or more methacrylate functions, the total of the monomers (I), (II), and (III) representing 100 parts by weight.

2. (previously presented): The composition of claim 1, wherein the monomer formula (I), said divalent A represents:



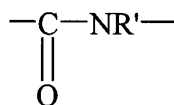
m<sub>2</sub> being defined in claim 1.

3. (previously presented): The composition of claim 1, further defined as comprising from 40 to 60 parts by weight of monomers (I) and  $m_1$  and  $m_2$  are integers from 5 to 10.
4. (previously presented): The composition of claim 1, wherein the monomer (II) is a urethane di(meth)acrylate oligomer.
5. (previously presented): The composition of claim 4, wherein the urethane di(meth)acrylate oligomer is further defined as an aliphatic polyester.
6. (previously presented): The composition of claim 1, wherein the monomer (II) has the formula:



wherein:

Q is a moiety of a valence n, with a straight, branched or cyclic structure, comprising at least two units of formula:



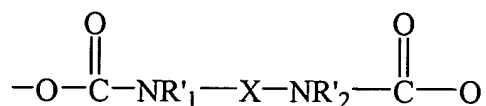
W is a divalent alkyl moiety, with a straight or branched structure, containing from 1 to 5 carbon atoms,

n varies from 2 to 4,

R represents H or CH<sub>3</sub>, and

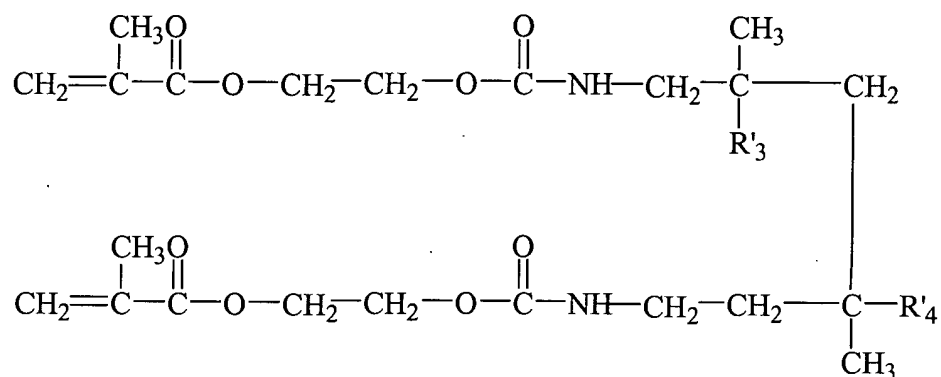
R<sup>1</sup> represents H or a valence link.

7. (previously presented): The composition of claim 6, wherein W represents the -CH<sub>2</sub>CH<sub>2</sub>- moiety.
8. (previously presented): The composition of claim 6, wherein, in the monomer formula (II), the Q moiety is a divalent moiety having the following formula:



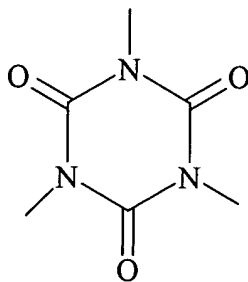
wherein X represents a straight or a branched divalent alkyl chain [having from 1 to 5 carbon atoms, preferably from 8 to 12 carbon atoms], and R'<sub>1</sub> and R'<sub>2</sub> independent from one another represent H or CH<sub>2</sub>.

9. (previously presented): The composition of claim 8, wherein the monomer (II) has the following formula:

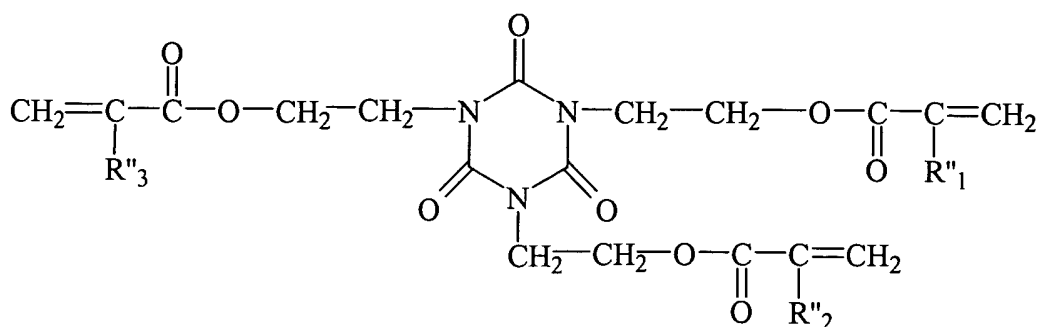


wherein R'<sub>3</sub> and R'<sub>4</sub> represent, independently from one another, H or CH<sub>2</sub>.

10. (previously presented): The composition of claim 6, wherein, in the monomer formula (II), Q represents a trivalent moiety of formula:



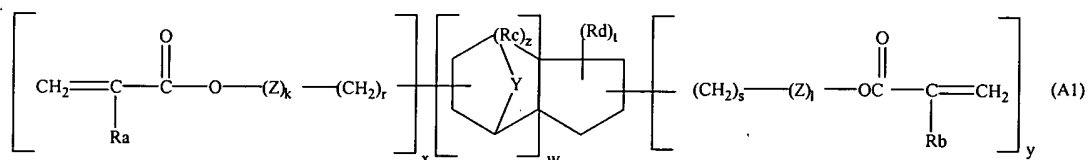
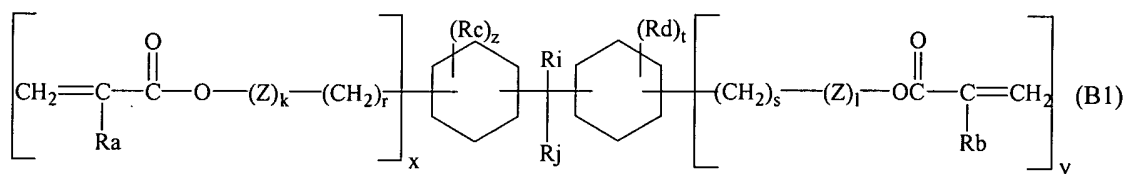
11. (previously presented): The composition of claim 10, wherein the monomer (II) has the following formula:

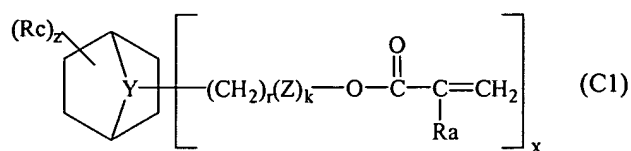


wherein R<sup>1</sup>, R<sup>2</sup>, and R<sup>3</sup> represent, independently from each other, H or CH<sub>3</sub>.

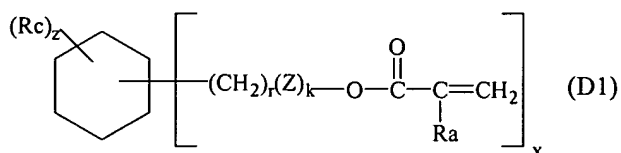
12. (previously presented): The composition of claim 1, further defined as comprising 30 to 40 parts by weight of monomer (II).

14. (previously presented): The composition of claim 13, wherein the monomer (III) has a formula of:





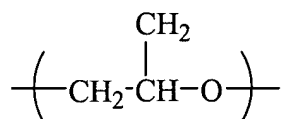
or



wherein:

Y is a divalent moiety selected amongst  $\text{---O---}$ ,  $\text{---CH}_2\text{---}$ ,  $\text{---C(H)(CH}_3\text{)---}$ ,

Z is a divalent moiety selected amongst  $\text{---(CH}_2\text{)}_p\text{---}$ , p being an integer from 1 to 4, and

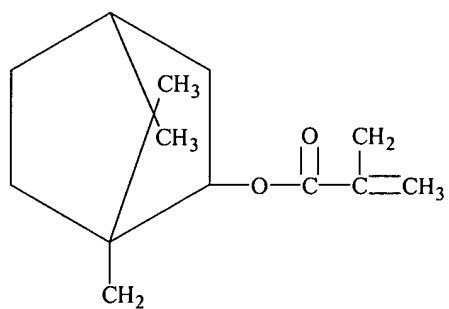
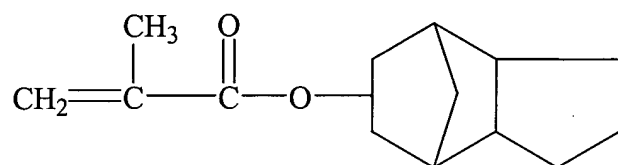
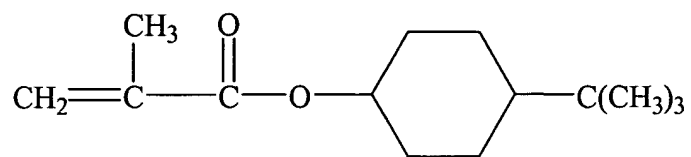


$\text{R}_a$ ,  $\text{R}_b$  represent H or  $\text{CH}_3$ ,  $\text{R}_c$ ,  $\text{R}_d$  represent, independently from one another, a straight or a branched alkyl moiety, having from 1 to 6 carbon atoms,

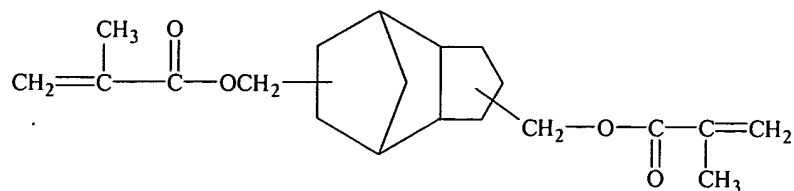
$\text{R}_i$ ,  $\text{R}_j$  represent, independently from one another, a straight or a branched alkyl moiety, having from 1 to 10 carbon atoms,

w is an integer of 1 to 3, x is an integer of 0 to 3, y is an integer of 0 to 3, providing that  $x + y$  is equal to or higher than 1, k is an integer of 0 to 6, l is an integer of 0 to 6, r is an integer of 0 to 6, s is an integer of 0 to 6, z is an integer of 0 to 3 and t is an integer of 0 to 3.

15. (previously presented): The composition of claim 14, wherein the monomer (III) has a formula of:



or



16. (previously presented): The composition of claim 1, further defined as comprising from 10 to 30 parts by weight of monomer (III).
17. (previously presented): The composition of claim 1, wherein the monomers (II) and (III) each provide, through homopolymerization, a homopolymer with a refraction index lower than or equal to 1.54.
18. (previously presented): The composition of claim 1, further defined as comprising one or more monomers (IV) polymerizable by radical mechanism and that are different from the monomers (I), (II) and (III), in a proportion of 0 to 40% by weight based on the total weight of monomers (I), (II) and (III).
19. (previously presented): The composition of claim 1, wherein the monomer (IV) is such that its homopolymer has a refraction index lower than or equal to 1.54.
20. (previously presented): The composition of claim 1, further defined as having a viscosity lower than or equal to 0.3 Pa.s.
21. (previously presented): A transparent polymer substrate with a refraction index varying between 1.48 and 1.52, wherein the polymer substrate is obtained through polymerization of the composition of claim 1.
22. (previously presented): An optical lens comprising a polymer substrate of claim 21.
23. (previously presented): The optical lens of claim 22, further defined as an ophthalmic lens.

24. (previously presented): The optical lens of claim 23, wherein the lens comprises glass.
25. (currently amended): The composition of claim 8, wherein X represents a straight or a branched divalent alkyl chain having from 1 to 12 carbon atoms.
26. (currently amended): The composition of claim 25, wherein X represents a straight or a branched divalent alkyl chain having from 1 to 5 carbon atoms.
27. (currently amended): The composition of claim 25, wherein X represents a straight or a branched divalent alkyl chain having from 8 to 12 carbon atoms.



**A Response to the Office Action Dated May 14, 2003:**

**A. Status of the Claims**

Claims 1-12 and 14-27 were pending at the time the Office Action dated May 14, 2003 was mailed to Applicants. Claims 25-27 have been amended to correct minor grammatical errors. In view of the fact that these amendments relate only to the correction of minor grammatical errors, they do not in any way affect the scope of the claims or range of equivalents that the elements in the claims are entitled. Claims 1-12 and 14-27, therefore, are currently pending.

**B. The Indefiniteness Rejection is Overcome**

The Action rejects claims 25-27 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Action states that claims 25-27 recite a “method of claim 8 [or 25]” but that claim 8 is directed towards a composition.

Applicants traverse. The present claims are definite and satisfy all of the requirements of 35 U.S.C. § 112, second paragraph.

However, to further the prosecution of this case, claims 25-27 have been amended to recite “The composition of claim 8 [or 25].” The indefiniteness rejection is, therefore, rendered moot in light of present claims 25-27. Applicants also note that because this was the only rejection issued by the Action for claims 25-27, claims 25-27 should be allowed to proceed to issuance.

Accordingly, Applicants request that the rejection of claims 25-27 under 35 U.S.C. § 112, second paragraph, be withdrawn.

### C. The Obviousness Rejection is Overcome

#### 1. A Summary of the Rejection, the Standard for Establishing a *prima facie* case of obviousness, and Applicants' Claimed Invention

##### i. A summary of the rejection

The Action also rejects claims 1-12 and 14-24 under 35 U.S.C. § 103(a) as being obvious over Fukushima *et al.* In making this obviousness rejection, the Action admits that monomer A of Fukushima *et al.* (which is directed towards a *butyleneoxy* group) fails to disclose Applicants claimed monomer I (which can comprise either a *propyleneoxy* group or a *methylethyleneoxy* group). The Action, page 3.

In an attempt to supplement the deficient teachings of Fukushima *et al.*, the Action states that propylene and butylene groups are close homologs. From this, the Action reasons that in the absence of any demonstration of the criticality of the use of propyleneoxy, “a person of ordinary skill in the art would have reasonably expected functional similarities between the products of Fukushima and [the] instant polymers ...” *Id.* Interestingly, the Action fails to present any evidence (either extrinsic or intrinsic) to support such a contention.

Applicants traverse this rejection for many reasons. Claims 1-12 and 14-24 are not rendered obvious over the teachings of Fukushima *et al.*

##### ii. The standard for establishing a *prima facie* case of obviousness

It is well settled that “[t]he examiner bears the initial burden of factually supporting any *prima facie* case of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under *no* obligation to submit evidence of non-obviousness.” *Manual of Patent Examining Procedure* (MPEP) § 2142 (8th Ed. Rev.) (emphasis added).

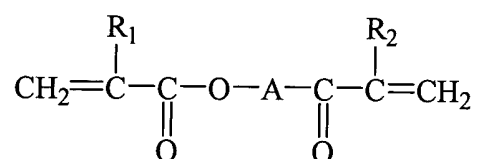
To establish a *prima facie* case of obviousness, the Examiner must show: (1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference

teachings; (2) a reasonable expectation of success; and (3) the prior art reference teaches or suggests all of the claim limitations. MPEP § 2142; *see also In re Vaeck*, 947 F.2d 488. With respect to the motivation to modify the reference requirement, the MPEP states “[t]he mere fact that references can be combined or *modified* does not render the resultant combination obvious unless *the prior art also suggests the desirability* of the combination.” MPEP § 2143.01 (emphasis added).

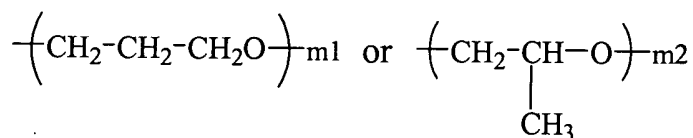
If any one of the three elements is missing, a *prima facie* case of obviousness cannot be established and any obviousness rejections must, therefore, be withdrawn.

### iii. Applicants’ claimed invention

Applicants presently claim “A polymerized monomeric composition comprising” monomers (I), (II), and (III). See claim 1. Applicants also claim “A transparent polymer substrate with a refraction index varying between 1.48 and 1.52, wherein the polymer substrate is obtained through polymerization of the composition of claim 1” (claim 21) and “An optical lens comprising a polymer substrate of claim 21” (claim 22). Monomer (I) comprises the following formula:



The A group in monomer (I) can be either:



Therefore, monomer (I) can include either a *propylenoxy* group or a *methylethyleneoxy* group respectively.

**2. The Action has not Presented Any Evidence to Support the Obviousness Rejection**

As an initial matter, it should be noted that the Action has not presented any evidence to support the present obviousness rejection. Despite the Action's unsubstantiated opinion that a person of ordinary skill in the art would expect functional similarities of a butyleneoxy group when compared to a propyleneoxy group, the Action does not provide any basis to support such a contention. The Action cites to no passages in the cited references, no additional references, and no other evidence (either extrinsic or intrinsic) to support this proposition. The Action's citation to *In re Wilder*, 563 F.2d 457, 460 is **not** evidence of non-obviousness. The citation to this case is used merely as legal theory to support the unsubstantiated arguments.

Based on the lack of evidence alone, the present obviousness rejection must fall. *See* MPEP § 2142 ("The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under **no obligation** to submit evidence of nonobviousness"). If the Action is relying on personal knowledge or any reference to support a motivation to modify the teachings of Fukushima *et al.*, Applicants must request that the Examiner prepare an affidavit and enter it into the file history of this application pursuant to 37 C.F.R. § 1.104(d)(2).

Accordingly, Applicants request that the present obviousness rejection of claims 1-12 and 14-24 be withdrawn.

**3. A *Prima Facie* case of Obviousness has not Been Established by the Action**

***i. Every element of the presently claimed invention is not taught or suggested by Fukushima et al.***

In order to establish a *prima facie* case of obviousness, the cited reference must teach every element of the present invention. *See* MPEP § 2142. This has not been done. As admitted by the Action, Fukushima *et al.* fails to teach the use of Applicants claimed monomer (I) which

can include either a propyleneoxy or methylethyleneoxy group. *See* the Action, page 4. Rather, Fukushima *et al.* is directed towards the use of a monomer A that has a butyleneoxy group. *See* Fukushima *et al.*, Abstract. In fact, Fukushima *et al.* does not even appear to mention the use of a propyleneoxy or a methylethyleneoxy group. Because every element is not taught or suggested by Fukushima *et al.*, the present obviousness rejection cannot be maintained.

**ii. *There is no motivation to modify Fukushima et al.***

Moreover, there is no motivation to modify the monomer A of Fukushima *et al.* to use a propyleneoxy or methylethyleneoxy group as claimed by Applicants. Again, monomer A in Fukushima *et al.* employs the use of a butyleneoxy group. *Id.* This reference simply does not appear to suggest or even mention Applicants' claimed monomer I, much less that it could be used with its disclosed teachings. *See* MPEP § 2143.01 ("The mere fact that references can be combined or *modified* does not render the resultant combination obvious unless *the prior art also suggests the desirability* of the combination." MPEP § 2143.01 (emphasis added)).

Also, contrary to the Action's contention, a person of ordinary skill in the art would *not* expect similar functionality between the Fukushima *et al.* monomer A (butyleneoxy group) and Applicants claimed monomer (I) (propyleneoxy or methylethyleneoxy group). For instance, the water absorption values of certain compositions in Fukushima *et al.* were compared. These compositions included either nonaethylene glycol dimethacrylate (9EGDM) or nonabutylene glycol dimethacrylate (9BGDM). *See* examples 7 and 11 and comparative examples 7 and 11 located in Tables 1 and 2 of Fukushima *et al.* It is well known in the art that 9EGDM is a structural homologue of 9BGDM in that 9EGDM differs by only two CH<sub>2</sub> groups.

Based on the Action's contention, a person of ordinary skill in the art would expect similar properties between 9BGDM and 9EGDM. This assertion is in fact proven wrong by the very reference cited by the Action. The data in Fukushima *et al.* show that the compositions

containing 9BGDM had a water absorption value of 1.6% (example 7) and 1.4% (example 11), respectively. In stark contrast, however, the compositions that used the 9EGDM homologue (which *only* differs by two CH<sub>2</sub> groups) had a much larger water absorption value (3.6% (comparative example 7) and 4.1% (comparative example 11), respectively.

As is evident, the data in Fukushima *et al.* indicates that structural homologues *cannot* be expected to have similar properties. This is further evidenced by the data presented in Applicants' specification<sup>1</sup> where compositions comprising Applicants' claimed monomer (I) had water absorption values of 0.58 % and 0.75% respectively. See Specification, page 21, line 30 to page 22, line 5.

Because there is no suggestion in the cited reference or to a person of ordinary skill in the art to modify the teachings of Fukushima *et al.*, a second element necessary in establishing a *prima facie* case of obviousness has not been established by the Action. This is further buttressed by the fact that a person of ordinary skill in the art would *not* expect Applicants' claimed monomer (I) to have similar properties with the monomers disclosed in Fukushima *et al.*

As such, a second element necessary to establish a *prima facie* case of obviousness has not been established by the Action.

**iii. *There is no reasonable expectation of success that Applicants' claimed monomer (I) would work***

A third element necessary to establish a *prima facie* case of obviousness requires a showing of a reasonable expectation of success that modifying the teachings of Fukushima *et al.* to use Applicants' claimed monomer (I) would work. Similar to the other two required elements, this has not been done.

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<sup>1</sup> Applicants' citation to data in the specification in support of their arguments does not result in a limitation to the claims. Rather, this citation merely further clarifies and explains Applicants' arguments.

As discussed directly above, the data in Fukushima *et al.* evidences the fact that structurally similar homologues **cannot** be relied upon as having similar properties. See Tables 1 and 2 of Fukushima *et al.* In light of this fact, it is apparent that there is no reasonable expectation of success that Applicants' claimed monomer (I) would work with the teachings disclosed in the Fukushima *et al.* reference.

Because **all** three of the necessary elements required to establish a *prima facie* case of obviousness have not been established by the Action, the present obviousness rejection cannot be maintained. Accordingly, Applicants request that the rejection of claims 1-12 and 14-24 as being obvious over Fukushima *et al.* be withdrawn.

**D. The Obviousness-Type Double Patenting Rejection**

The Action provisionally rejects claims 1-27 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of co-pending Application No. 10/061,761. Applicants note that they will provide a Terminal Disclaimer upon the indication of allowable subject matter in this case.

**E. The Submission of a Foreign Priority Document**

Applicants also note that they will submit a certified copy of French Application No. 99/10031, filed on August 2, 1999, upon the indication of allowable subject matter.

**F. Conclusion**

Applicants believe that the present document is a full and complete response to the Office Action dated May 14, 2003. In conclusion, Applicants submit that, in light of the foregoing remarks, the present case is in condition for allowance, and such favorable action is respectfully requested.